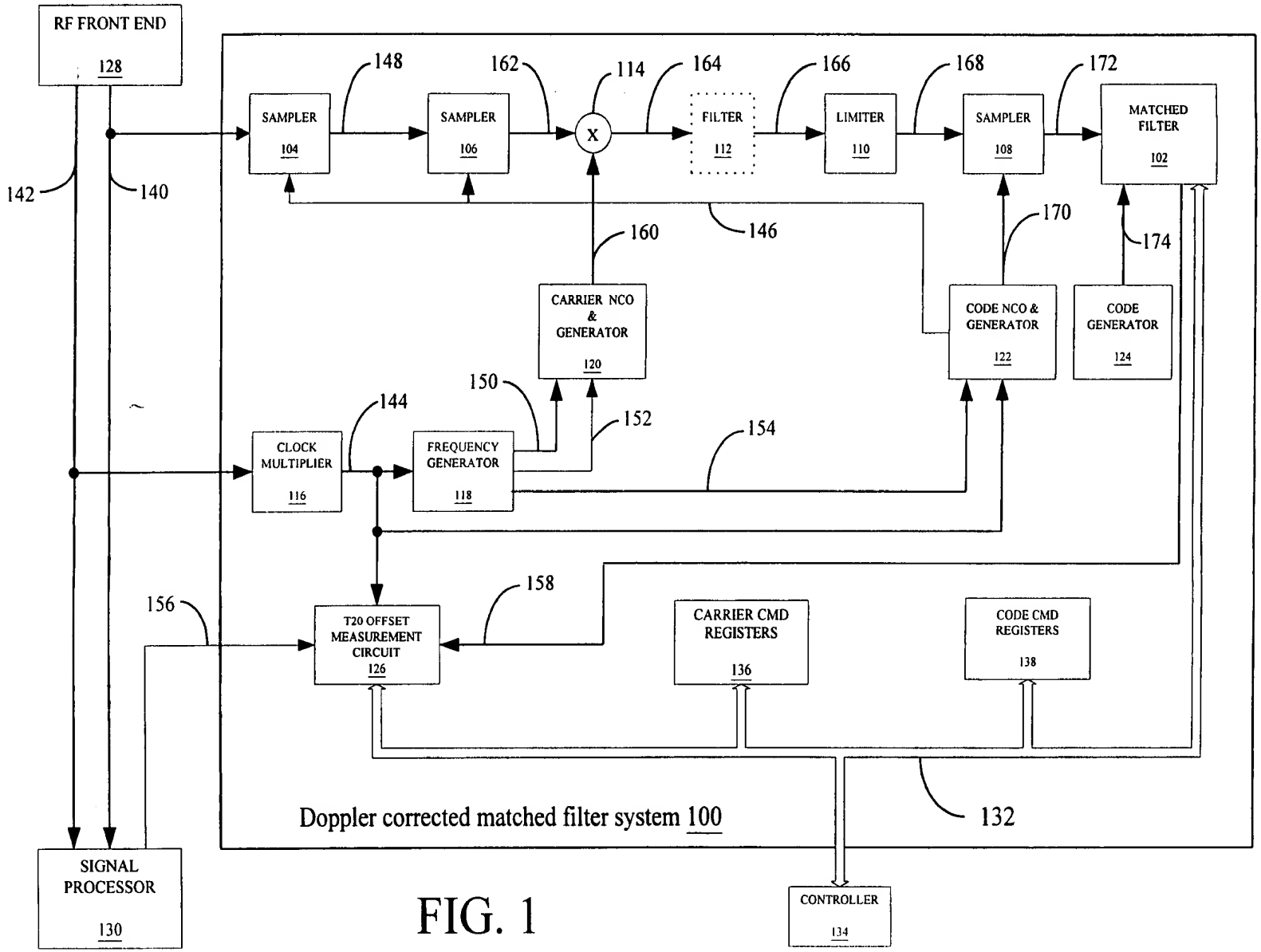

FIG. 1

09604595 . 062700

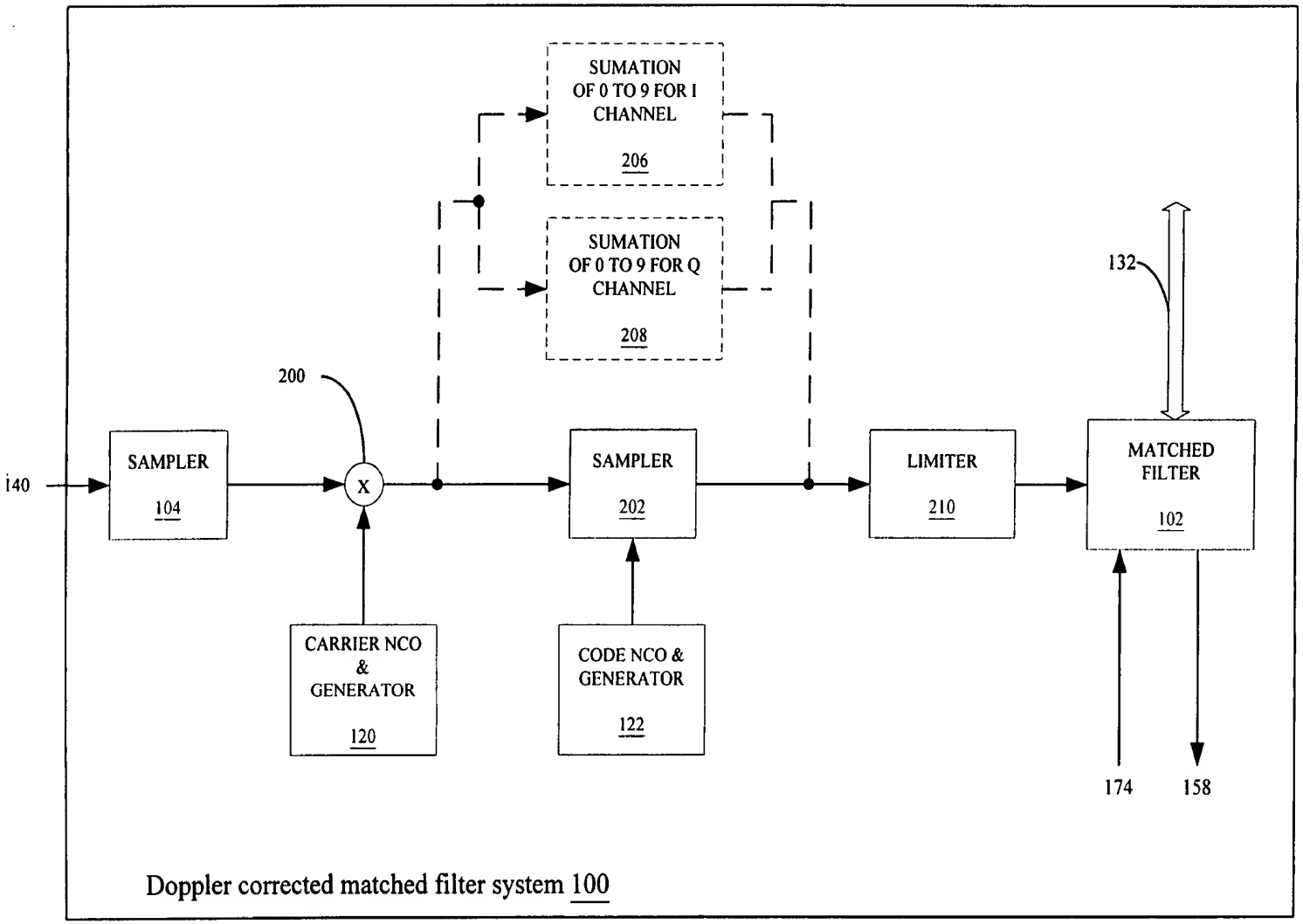

FIG. 2

09604595 .062700

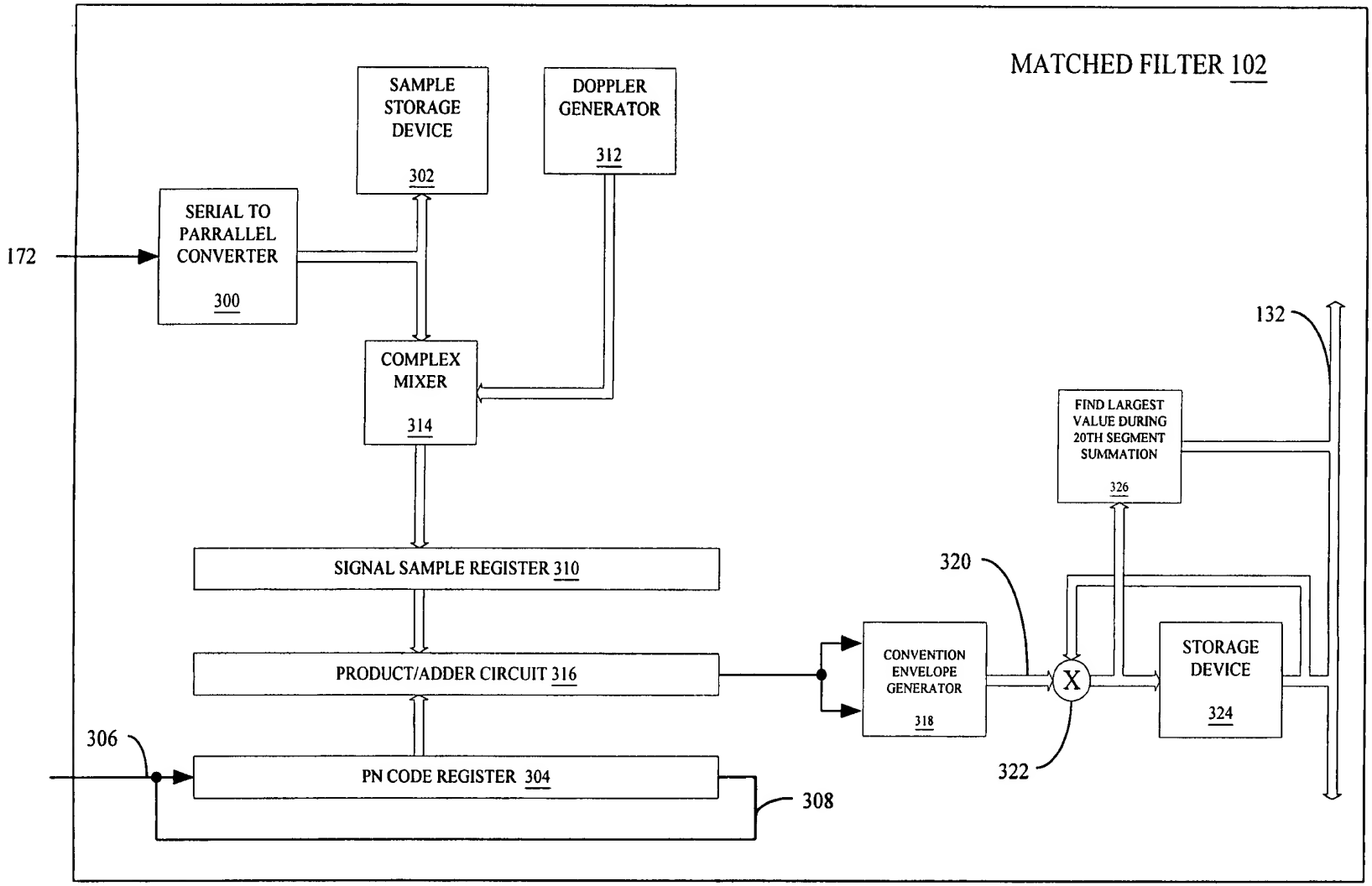

FIG. 3

0960535.062700

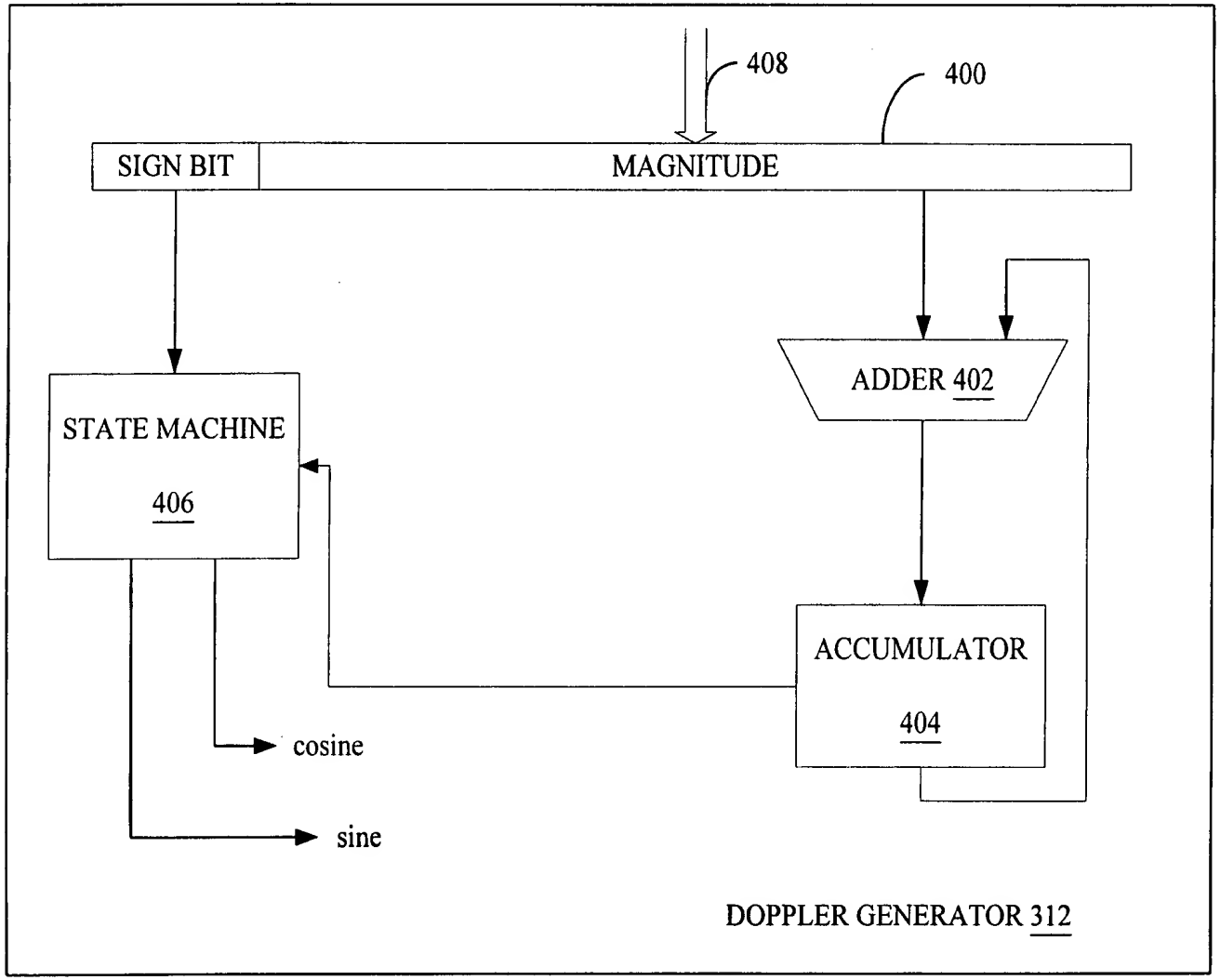
408
400
SIGN BIT
MAGNITUDE
ADDER 402
STATE MACHINE
406
ACCUMULATOR
404
cosine
sine
DOPPLER GENERATOR 312

FIG. 4

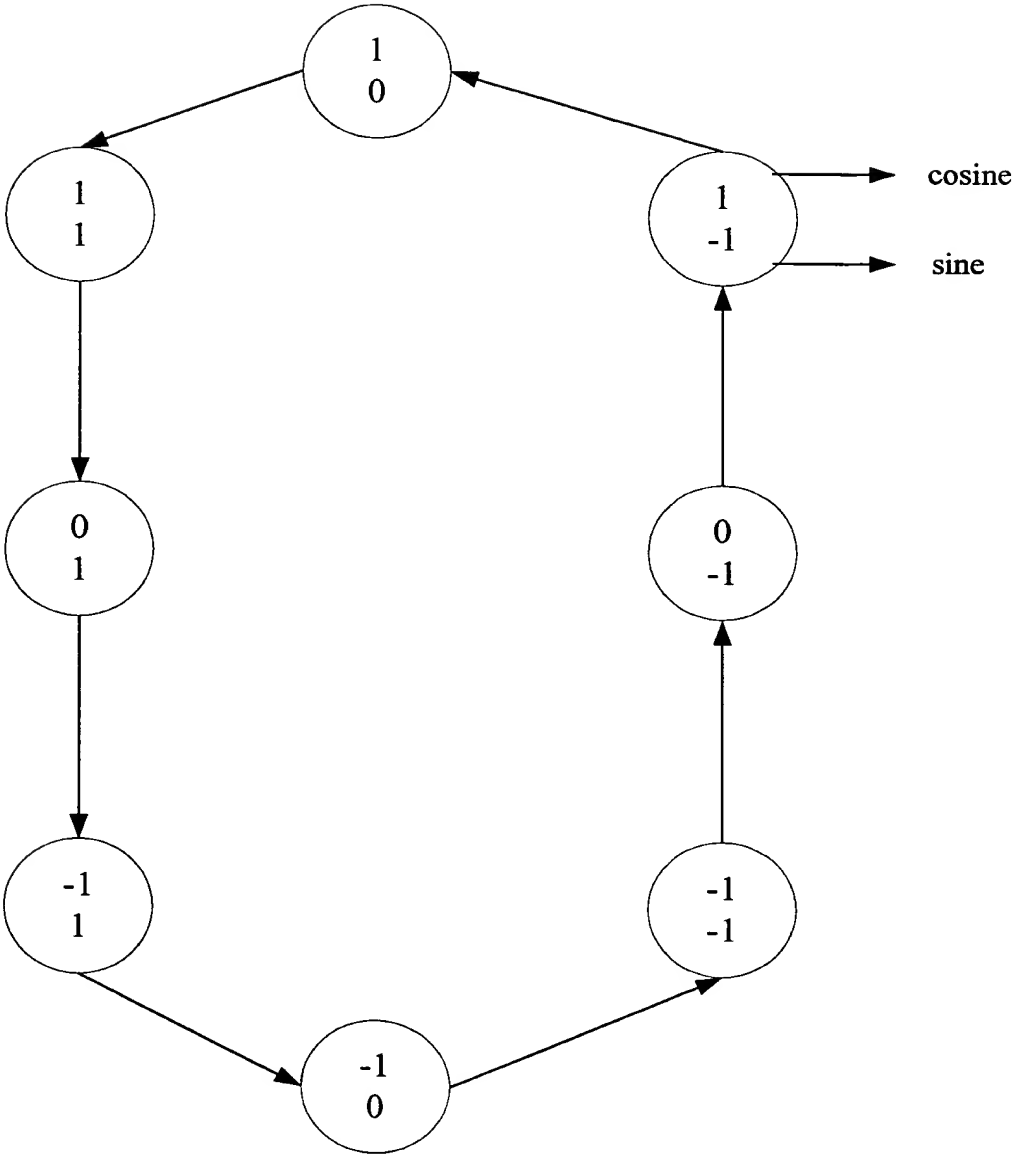

FIG. 5

09545595 - 062900

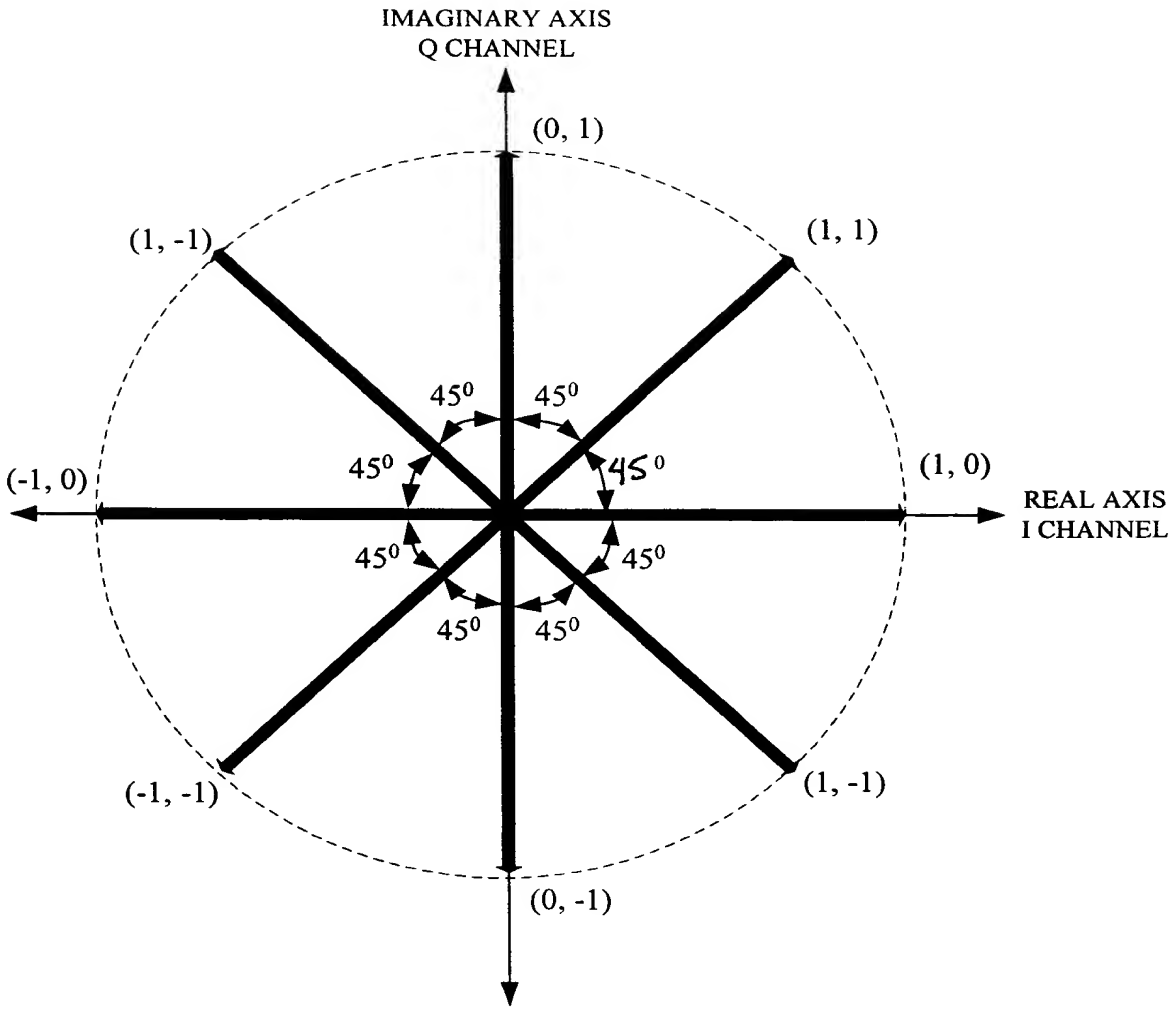

FIG. 6

00290"5654960

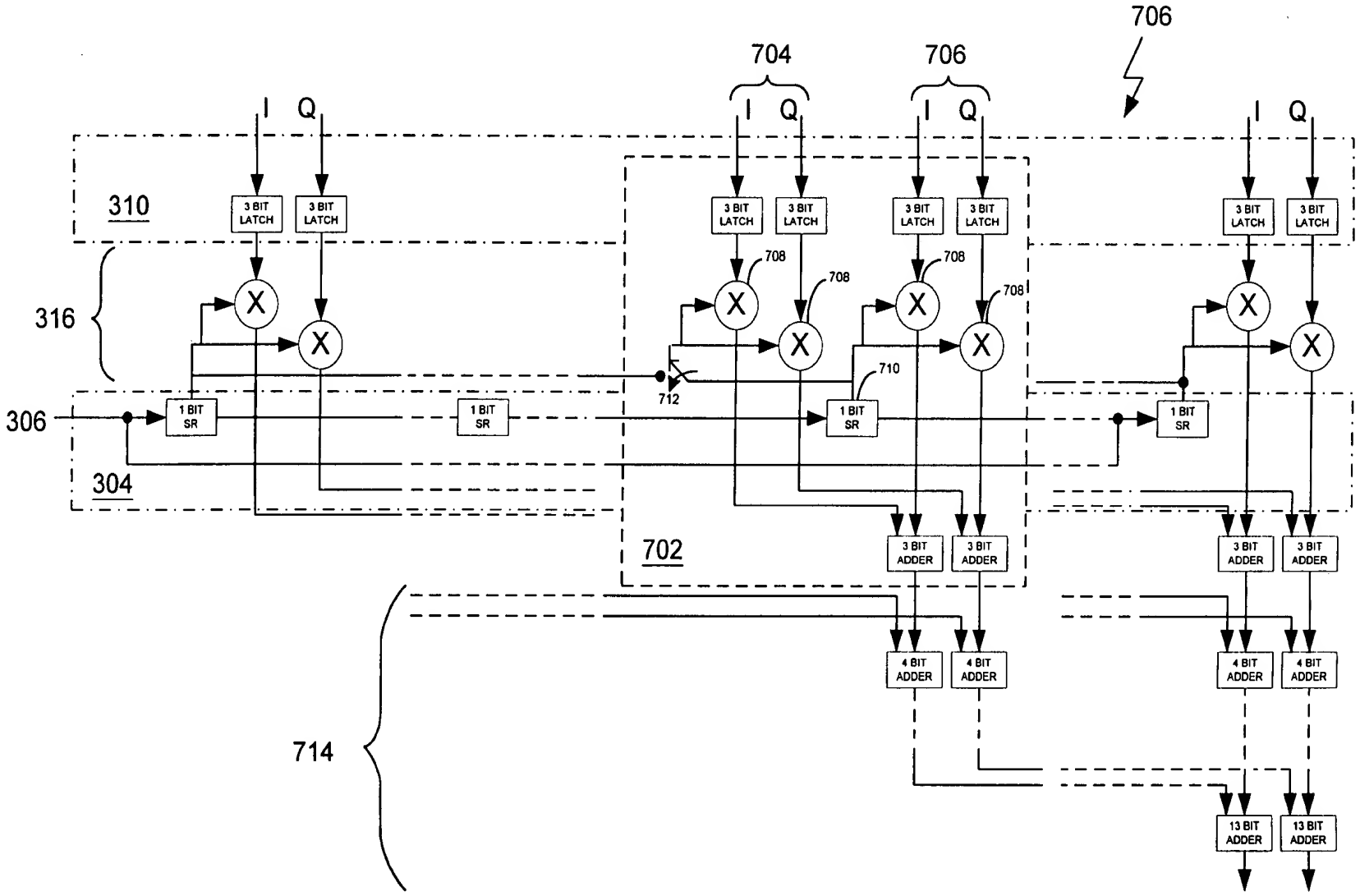

FIG. 7

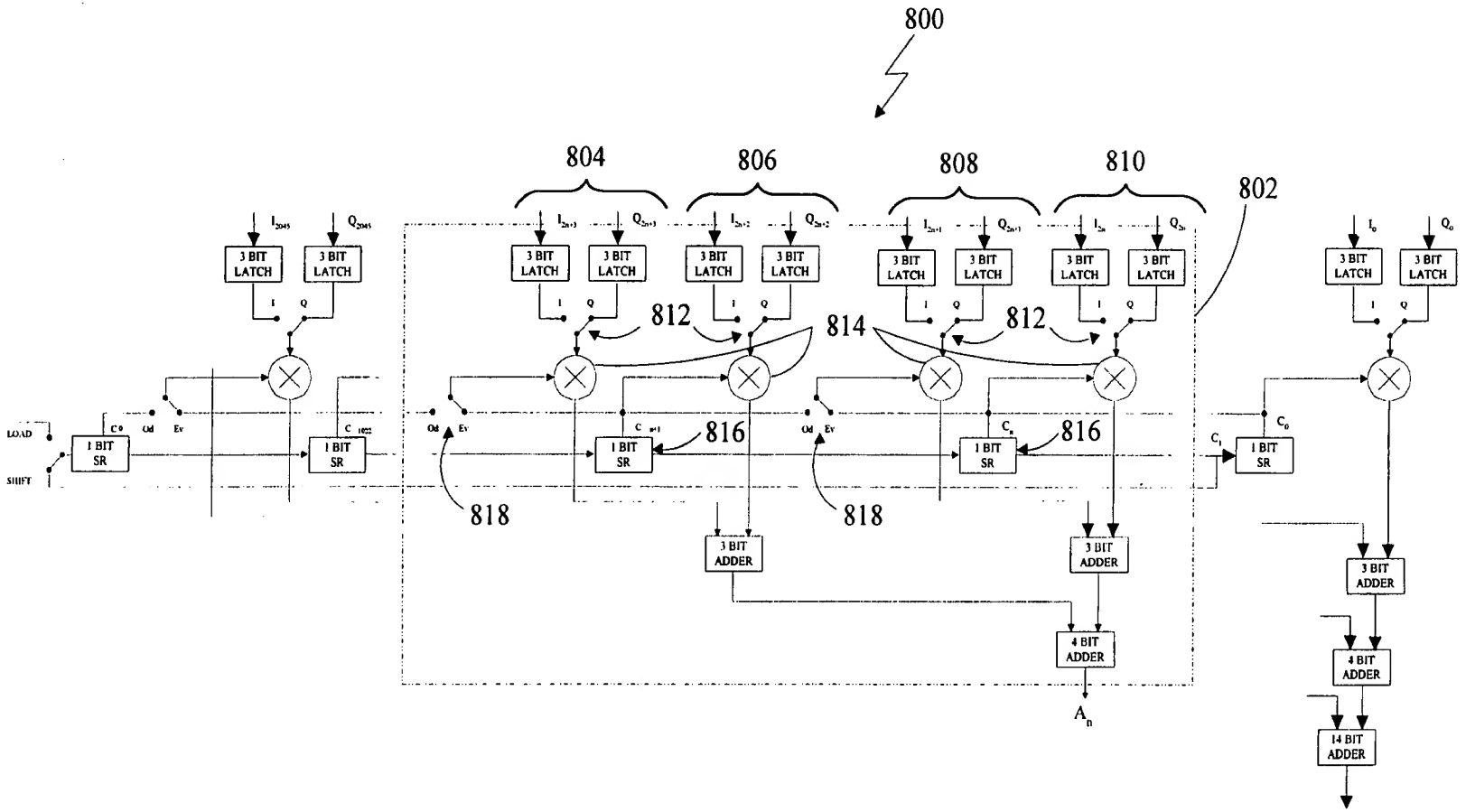
800
804
806
808
810
802
812
814
816
818
3 BIT LATCH
1 BIT SR
3 BIT ADDER
4 BIT ADDER
14 BIT ADDER
LOAD
SHIFT
Od
Ev
A_n

FIG. 8

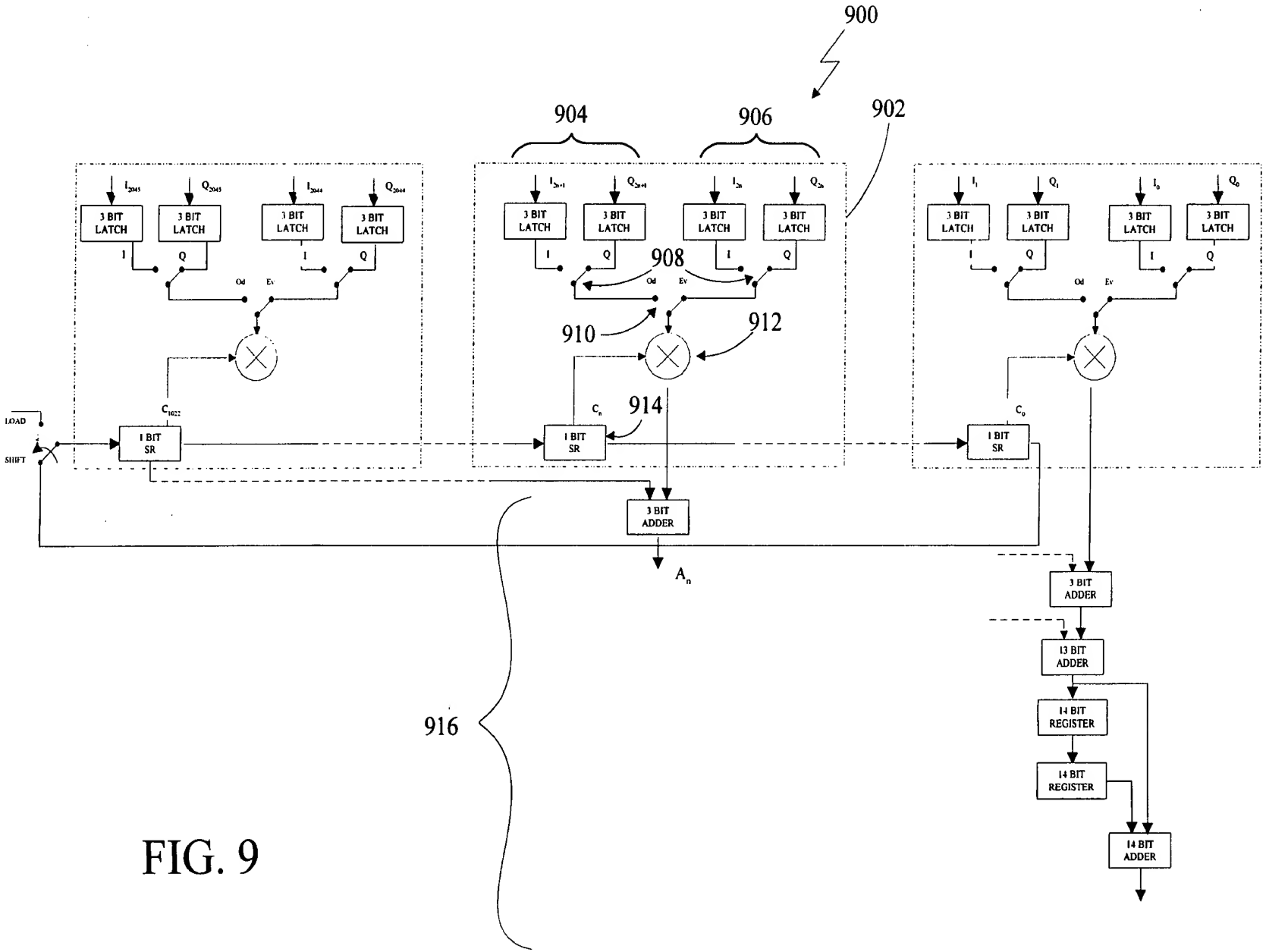
900
902
904
906
908
910
912
914
916
3 BIT LATCH
1 BIT SR
3 BIT ADDER
13 BIT ADDER
14 BIT REGISTER
14 BIT ADDER
LOAD
SHIFT
Od
Ev

FIG. 9

Row (1010)	C (1004)	Switches (1006)	A_n in FIG. 8 (1002)	A_n in FIG. 9 (1000)	Sum of Rows (1008)
1	C_n	EQ	$C_nQ_{2n} + C_nQ_{2n+1} + C_{n+1}Q_{2n+2} + C_{n+1}Q_{2n+3}$	$C_nQ_{2n} + C_{n+1}Q_{2n+2}$	1 + 3
2	C_n	EI	$C_nI_{2n} + C_nI_{2n+1} + C_{n+1}I_{2n+2} + C_{n+1}I_{2n+3}$	$C_nI_{2n} + C_{n+1}I_{2n+2}$	2 + 4
3	C_n	OQ	$C_nQ_{2n} + C_{n+1}Q_{2n+1} + C_{n+1}Q_{2n+2} + C_{n+2}Q_{2n+3}$	$C_nQ_{2n+1} + C_{n+1}Q_{2n+3}$	1 + 7
4	C_n	OI	$C_nI_{2n} + C_{n+1}I_{2n+1} + C_{n+1}I_{2n+2} + C_{n+2}I_{2n+3}$	$C_nI_{2n+1} + C_{n+1}I_{2n+3}$	2 + 8
5	C_{n+1}	EQ	$C_{n+1}Q_{2n} + C_{n+1}Q_{2n+1} + C_{n+2}Q_{2n+2} + C_{n+2}Q_{2n+3}$	$C_{n+1}Q_{2n} + C_{n+2}Q_{2n+2}$	5 + 7
6	C_{n+1}	EI	$C_{n+1}I_{2n} + C_{n+1}I_{2n+1} + C_{n+2}I_{2n+2} + C_{n+2}I_{2n+3}$	$C_{n+1}I_{2n} + C_{n+2}I_{2n+2}$	6 + 8
7	C_{n+1}	OQ	$C_{n+1}Q_{2n} + C_{n+2}Q_{2n+1} + C_{n+2}Q_{2n+2} + C_{n+3}Q_{2n+3}$	$C_{n+1}Q_{2n+1} + C_{n+2}Q_{2n+3}$	5 + 11
8	C_{n+1}	OI	$C_{n+1}I_{2n} + C_{n+2}I_{2n+1} + C_{n+2}I_{2n+2} + C_{n+3}I_{2n+3}$	$C_{n+1}I_{2n+1} + C_{n+2}I_{2n+3}$	6 + 12
9	C_{n+2}	EQ	$C_{n+2}Q_{2n} + C_{n+2}Q_{2n+1} + C_{n+3}Q_{2n+2} + C_{n+3}Q_{2n+3}$	$C_{n+2}Q_{2n} + C_{n+3}Q_{2n+2}$	
10	C_{n+2}	EI	$C_{n+2}I_{2n} + C_{n+2}I_{2n+1} + C_{n+3}I_{2n+2} + C_{n+3}I_{2n+3}$	$C_{n+2}I_{2n} + C_{n+3}I_{2n+2}$	
11	C_{n+2}	OQ	$C_{n+2}Q_{2n} + C_{n+3}Q_{2n+1} + C_{n+3}Q_{2n+2} + C_{n+4}Q_{2n+3}$	$C_{n+2}Q_{2n+1} + C_{n+3}Q_{2n+3}$	
12	C_{n+2}	OI	$C_{n+2}I_{2n} + C_{n+3}I_{2n+1} + C_{n+3}I_{2n+2} + C_{n+4}I_{2n+3}$	$C_{n+2}I_{2n+1} + C_{n+3}I_{2n+3}$	

FIG. 10

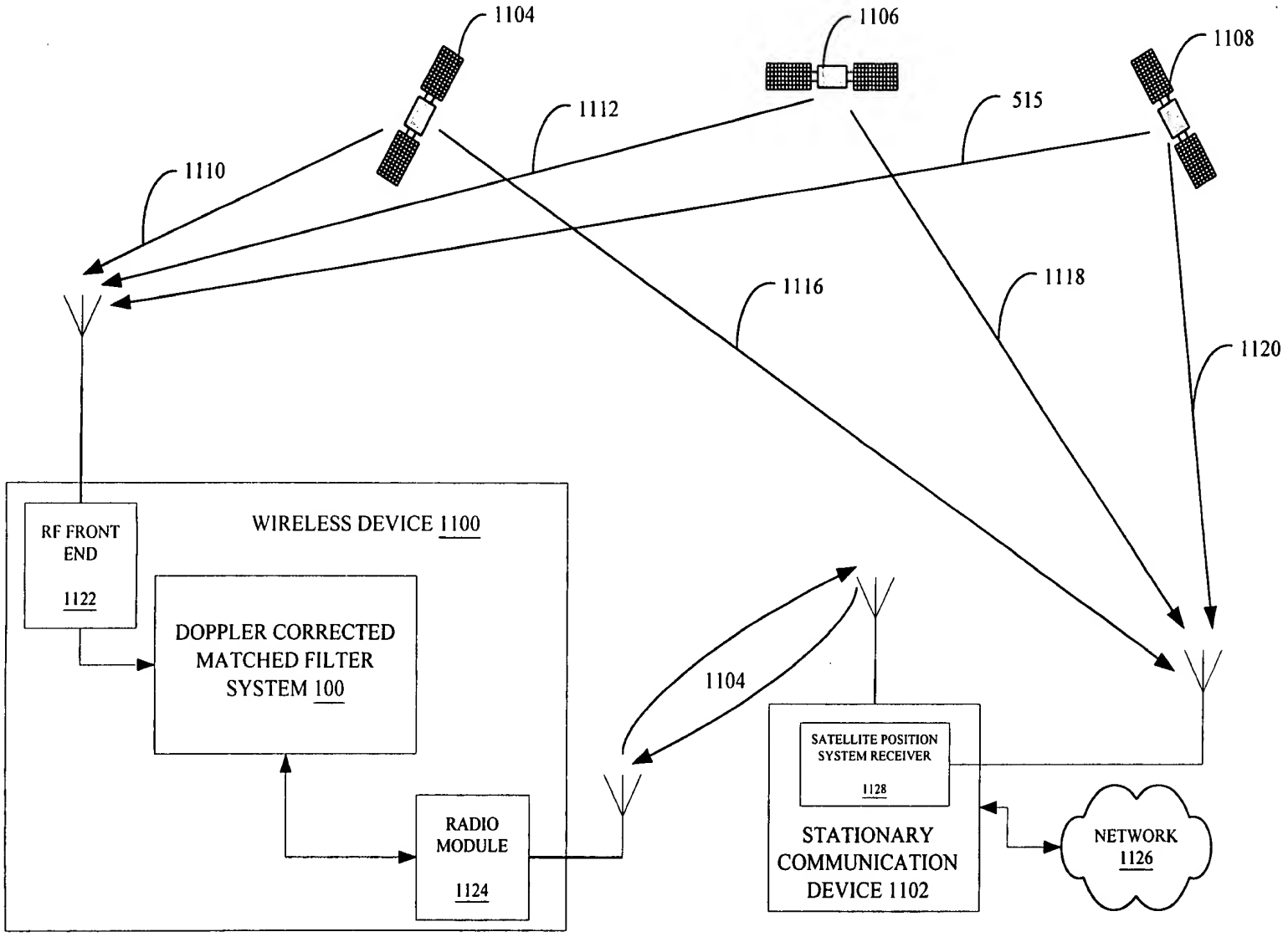
1104
1106
1108
1112
515
1110
1116
1118
1120
RF FRONT END
1122
WIRELESS DEVICE 1100
DOPPLER CORRECTED MATCHED FILTER SYSTEM 100
RADIO MODULE
1124
1104
SATELLITE POSITION SYSTEM RECEIVER
1128
STATIONARY COMMUNICATION DEVICE 1102
NETWORK
1126

FIG. 11